REMARKS

This communication is responsive to the Office Action mailed 29 June 2005. The application has been amended in the following manner:

- the title has been amended to be more descriptive;
- Figure 1-A has been amended to replace one of the occurrences of reference numeral "14" with a corrected reference numeral "20";
- the specification has been amended to correct typographical errors and for clarity;
- claims 1, 2, 8, 9-12, 15 and 16 have been amended as discussed in more detail below; and
- new claims 17-28 have been added.

The Applicant submits that these amendments are completely supported by the application as originally filed and that no new matter has been added.

Claims 1-28 are pending after this amendment.

Amendments to the Drawings

The Applicant has amended Figure 1-A to replace one of the occurrences of reference numeral "14" with a corrected reference numeral "20". This amendment is reflected in the enclosed replacement drawing sheet. Figure 1-A is otherwise unaltered.

Claims 2-4, 9-11 and 15-16 - Allowable Subject Matter

The Office Action indicates that claims 2-4, 9-11 and 15-16 would be allowable if placed in independent form. This has been done by:

- amending claim 2 to recite the elements of claim 1 (claims 3 and 4 depend from claim 2);
- amending claim 9 to recite the elements of claim 1;
- amending claim 10 to recite the elements of claim 1 (claim 11 depends from claim 10); and
- amending claims 15 and 16 to recite the elements of claim 12.

The Applicant has also made minor clarifying amendments to claims 2, 9, 10, 11, 15 and 16. These clarifying amendments are submitted to not narrow the scope of claims 2, 9, 10, 11, 15 and 16. The Applicant submits that claims 2-4, 9-11 and 15-16 are now in condition for allowance.

Claims 1, 5-7 and 12-14

Matsuoka et al. (US 5,508,784) has been cited in relation to claims 1, 5-7 and 12-14.

As understood by the applicant, Matsuoka et al. discloses a speed control for a color copier, printer or the like. The speed control includes an active controller that, based on a measured drum speed and a calculated drum acceleration, calculates cancelling speed data. The cancelling speed data is converted into a drive control pulse (see col. 8, ln. 14-25). Matsuoka et al. does not describe in any detail the control algorithms used to obtain the cancelling speed data or to convert the cancelling speed data into a drive pulse. Presumably these control algorithms would involve various parameters. Matsuoka et al. do not discuss how these parameters are obtained and do not discuss altering these parameters to permit effective control of rotational speed for different loads. The Matsuoka et al. speed control uses only variation of drive pulse intensity to track a desired speed. Matsuoka et al. do not appear to provide an adaptive controller.

Claim 1, as amended, recites the combination of "determining from the response a new value for at least one control parameter, the at least one control parameter comprising a parameter of a relationship which relates an output of a drum controller for driving the drum load to a state of rotation of the drum load; and updating the at least one control parameter in accordance with the new value". Matsuoka et al. fail to disclose this feature of claim 1. In contrast, Matsuoka et al. describe varying only the intensity of the drive pulses to effect speed control. Varying drive pulse intensity as taught by Matsuoka et al. does not amount to varying a control parameter having the features recited in claim 1. Therefore, the Applicant submits that claim 1, and claims 5-7 which depend from claim 1, are patentable over Matsuoka et al.

Claim 12, as amended, recites "the controller having a drive parameter estimator for determining one or more drive parameters suitable for the drum load, the one or more drive parameters comprising a parameter of a relationship which relates the control signals to a state or rotation of the drum". Matsuoka et al. do not disclose a drive parameter estimator

that determines drive parameters having the features recited in claim 12. As discussed above, Matsuoka et al. teach only variation of drive pulse intensity to effect speed control and do not describe how parameters affecting the operation of the various blocks in Figure 3 are obtained. Therefore, the Applicant submits that claim 12, and claims 13-14 which depend from claim 12, are patentable over Matsuoka et al.

Claim 8

The Applicant has amended claim 8 for clarity. Claim 8 depends from claim 1 and is submitted to be allowable for at least this reason.

New Claims 17-28

The Applicant has added new claims 17 to 28. New claims 17-28 are submitted to be fully supported by the specification as originally filed. These claims are submitted to be allowable at least because claims 17-21 depend from claim 12 and claims 22-28 depend from claim 1.

Conclusion

The Applicant respectfully requests reconsideration and allowance of this application in light of the foregoing amendments and comments.

Respectfully submitted,
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Amendments to the Drawings

Please replace Figure 1-A with the Figure 1-A as set out on the enclosed replacement sheet.